

4 electricity power signal to pass from the network to a consumer's
5 premises and for input and/or removal of a telecommunication
6 signal from the network, said communications apparatus
7 comprising:

8 a main inductor arranged between a mains electricity input
9 from said network and a mains electricity output to said
10 consumer's premises to allow the low frequency high amplitude
11 mains electricity power signal to pass through the main inductor
12 in a low impedance path from the mains electricity input from
13 said network to said mains electricity output to said consumer's
14 premises for frequencies from zero frequency to a low frequency
15 of said low frequency high amplitude mains electricity power
16 signal; and

17 a coupling capacitor connected between said mains
18 electricity input and a signal input/output line to allow the
19 telecommunication signal to pass through the coupling capacitor
20 in a path between said mains electricity input and the signal
21 input/output line and to attenuate low frequency components of
22 said low frequency high amplitude mains electricity power signal.

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11. (Amended) The communications apparatus as claimed in
claim 9, further comprising a shunt capacitor connected between
ground and said mains electricity output for shunting to ground
any of the telecommunication signal having passed to said mains

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electricity output.

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14. (Amended) Communications apparatus for use with an
electricity distribution and/or power transmission network for
allowing, in use, a low frequency high amplitude mains
electricity power signal to pass from the network to a consumer's
premises and for input and/or removal of a telecommunication
signal from the network, said communications apparatus
comprising:

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3
a first inductor arranged between a mains electricity input
from said network and a mains electricity output to said
consumer's premises to allow the low frequency high amplitude
mains electricity power signal to pass through the first inductor
in a low impedance path from the mains electricity input from
said network to said mains electricity output to said consumer's
premises for frequencies from zero frequency to a low frequency
of said low frequency high amplitude mains electricity power
signal;

a series combination of a coupling capacitor and a fuse
connected between said mains electricity input and a signal
input/output line to allow the telecommunication signal to pass
through the coupling capacitor and the fuse in a path between
said mains electricity input and the signal input/output line and
to attenuate low frequency components of said low frequency high

23 amplitude mains electricity power signal; and
24 a second inductor connected between said signal
25 input/output line and ground, said second inductor providing a
26 current path for blowing said fuse when said coupling capacitor
27 suffers a fault condition.

15. (Amended) The communications apparatus as claimed in
claim 14, further comprising a shunt capacitor connected between
ground and said mains electricity output for shunting to ground
any of the telecommunication signal having passed to said mains
electricity output.

18. (Amended) Communications apparatus for use with an
electricity distribution and/or power transmission network for
allowing, in use, a low frequency high amplitude mains
electricity power signal to pass from the network to a consumer's
premises and for input and/or removal of a telecommunication
signal from the network, said communications apparatus
comprising:

a first inductor arranged between a mains electricity input
from said network and a mains electricity output to said
consumer's premises to allow the low frequency high amplitude
mains electricity power signal to pass through the first inductor
in a low impedance path from the mains electricity input from

13 said network to said mains electricity output to said consumer's
14 premises for frequencies from zero frequency to a low frequency
15 of said low frequency high amplitude mains electricity power
16 signal;

17 a series combination of a coupling capacitor and a fuse
18 connected between said mains electricity input and a signal
19 input/output line to allow the telecommunication signal to pass
20 through the coupling capacitor and the fuse in a path between
21 said mains electricity input and the signal input/output line and
22 to attenuate low frequency components of said low frequency high
23 amplitude mains electricity power signal;

24 a second inductor connected between said signal
25 input/output line and ground, said second inductor providing a
26 current path for blowing said fuse when said coupling capacitor
27 suffers a fault condition; and a series combination of a first
28 fuse and a first shunt capacitor connected between ground and
29 said mains electricity output;

30 wherein said first inductor includes a conductor wrapped
31 around at least one ferrite core; and

32 further including a second shunt capacitor and a second fuse
33 connected between ground and an intermediate point of said
34 conductor.

[Please add the following new claims 20 to 28:

Sub D1
1 -- 20. The communications apparatus as claimed in claim 9,
2 wherein the main inductor has an impedance for substantially
3 preventing communications signals of at least one megahertz from
4 passing from the mains electricity input from said network to
5 said mains electricity output to said consumer's premises.

18
1 ~~21~~. The communications apparatus as claimed in claim ¹~~9~~,
2 wherein the main inductor has an inductance of at least about 10
3 microhenries.

19
1 ~~22~~. The communications apparatus as claimed in claim ¹~~9~~,
2 wherein the main inductor has an impedance such that no more than
3 about one volt of voltage is produced across the main inductor
4 when conducting one hundred amperes of current of the low
5 frequency high amplitude mains electricity power signal.

Sub D2
1 23. The communications apparatus as claimed in claim 14,
2 wherein the main inductor has an impedance for substantially
3 preventing communications signals of at least one megahertz from
4 passing from the mains electricity input from said network to
5 said mains electricity output to said consumer's premises.

15
1 ~~24~~. The communications apparatus as claimed in claim ⁶~~14~~,
2 wherein the main inductor has an inductance of at least about 10

3 microhenries.

1 ¹⁶
25. The communications apparatus as claimed in claim ¹⁴,
2 wherein the main inductor has an impedance such that no more than
3 about one volt of voltage is produced across the main inductor
4 when conducting one hundred amperes of current of the low
5 frequency high amplitude mains electricity power signal.

1 ¹³
26. The communications apparatus as claimed in claim 18,
2 wherein the main inductor has an impedance for substantially
3 preventing communications signals of at least one megahertz from
4 passing from the mains electricity input from said network to
5 said mains electricity output to said consumer's premises.

1 ¹⁹
27. The communications apparatus as claimed in claim ¹⁰ 18,
2 wherein the main inductor has an inductance of at least about 10
3 microhenries.

1 ¹⁸
28. The communications apparatus as claimed in claim ¹⁰ 18,
2 wherein the main inductor has an impedance such that no more than
3 about one volt of voltage is produced across the main inductor
4 while conducting one hundred amperes of current of the low
5 frequency high amplitude mains electricity power signal. --